



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

SW

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/466,545	12/17/1999	DARRYL L. GAMEL	96794DIV3	1308

7590 12/15/2004

MICHAEL C ANTONE  
KIRKPATRICK & LOCKHART LLP  
1500 OLIVER BUILDING  
PITTSBURGH, PA 15222

EXAMINER
----------

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
----------	--------------

3729

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/466,545

Applicant(s)

GAMEL ET AL.

Examiner

A. Dexter Tugbang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3,5-7,9,54-60,62-64 and 71-73 is/are pending in the application.  
4a) Of the above claim(s) 6,55-60 and 71-73 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 3,5,7,9 and 62-64 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The applicant(s) response filed on 8/18/04 has been fully considered and made of record.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Election/Restrictions***

3. Claims 6, 55-60 and 71-73 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 20.

### ***Terminal Disclaimer***

4. The terminal disclaimer filed on 8/18/04 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of U.S. Patent 6,332,269 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Objections***

5. Claim 62 is objected to because of the following informalities: the latter phrase of “a fiducial marker” (line 5-6) should be replaced with --the fiducial marker--. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. Claims 3, 5, 7, 54 and 62-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawatani 4,733,462.

Regarding Claims 3, 54 and 62, Kawatani discloses a method of placing a component comprising: placing the component 7 into a nest (IC alignment unit 21), the component having leads and an alignment-indicating physically asymmetric fiducial marker (read as bottom surface area of the component 7) where the physically asymmetric fiducial marker defines a bottom surface of the component that is asymmetric with a top surface of the component, and the nest having an asymmetrically shaped recess 22 (in Fig. 1); detecting whether the physically asymmetric fiducial marker on the component mates with the asymmetric shaped recess 22; comparing the alignment of the component (see col. 4, lines 45+); and placing the component on the substrate 1 when mating of the physically asymmetric fiducial marker with the asymmetrically shaped recess is detected (see Figs. 2-4).

Regarding Claims 5 and 7, the positioning pin 13 enables the component to be distinguished when the component is in predetermined alignment and also senses when the component contacts an upper surface of the recess (shown in Fig. 6).

Regarding Claim 63, Kawatani further shows that (in Fig. 6), the top surface of the component 7, extends beyond the upper surface of the recess 22, which is detected.

Regarding Claim 64, Kawatani further teaches that the recess corresponds to a beveled edge (anyone of the leads of the component 7) of the component 7.

***Claim Rejections - 35 USC § 103***

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawatani in view of Sakaguchi et al 5,628,110.

Kawatani discloses the claimed manufacturing method as previously discussed, further including determining whether the fiducial marker is mated. Kawatani does not teach the specific steps of directing, receiving and comparing the radiation pattern.

Sakaguchi teaches directing, comparing and receiving a pattern of radiation (shown in Fig. 2) for the purpose of disregarding defective components (see col. 6, lines 13+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Kawatani by including the process steps of Sakaguchi, to positively disregard defective components.

***Response to Arguments***

8. The applicant's arguments filed in the response on 8/18/04 have been fully considered, and are now considered to be met and inclusive of the rejection set forth above, particularly now that the claimed "fiducial marker" of the component can be read as the top surface of the component with this top surface is asymmetric with respect to the bottom surface of the component 7.

In response to applicant's argument that the secondary reference of Sakaguchi et al does not teach any fiducial marker, the examiner notes that this feature was relied upon in Kawatani. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must

Art Unit: 3729

be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

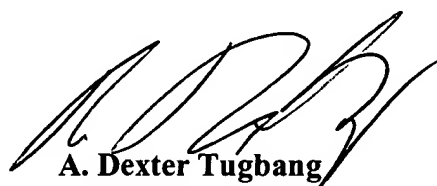
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

December 10, 2004